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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/880,612

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Kenji Mukai

NAK1-BP14

7017

21611

7590

07/01/2004

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EXAMINER

PHAM, HOA Q

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/880,612

Applicant(s)

MUKAI ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 84-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 84-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 84 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 84 recites the limitation "the chroma of second light source" in line 9.

There is insufficient antecedent basis for this limitation in the claim.

- b. Claim 84 is not clear what whiteness of which light source is evaluated? First light source or second light source? It is also not clear how the "second light source" and "chroma of the second light source" are relative to the equation (1) so that the whiteness is determined? The presence of the second light source in the claim does not make any sense.

3. The amendment filed 4/20/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: (1) the steps "**using selected whiteness values  $W...W=aC1 + b...(1)$** " and "**calculating a whiteness value  $W2...W2 = aC2 + b$** " in claim 85 are not supported by the original disclosure; (2) the all the limitations in claim 90, such as, "**calibrating the whiteness measurement**

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**apparatus using standard illuminant”, “calibrating th whiteness ... Color Appearance Model”, equation (1):  $W = aC^2 + b$** , etc., are not supported by the present disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. Claims 86-89 are dependent from claim 85, therefore inherit the deficiency of claim 85.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al (5,071,727).

Regarding claim 1, Ikeda et al discloses a method for evaluating whiteness of light from a light source comprising the steps of (a) calculating chroma (C) (column 10, lines 20-21), calculating whiteness from the chroma using an equation (1)  $w = aC + b$  ... (it is noted that the equation in column 10, line 7 of Ikeda et al is in the same form of the equation (1) of the present invention). Ikeda et al does not explicitly teach that the chroma is calculated by a method defined by the CIE 1997 Interim Color Appearance Model, however, it would have been obvious to use replace the calculating method of Ikeda et al by this method because they are function in the same manner.

Regarding claim 84, since the presence of the second light source does not make any sense and does not connect to the claimed invention, therefore, the rejection is the same as claim 1.

7. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al as applied to claim 1 above, and further in view of Nishino et al (4,469,798).

Ikeda et al does not explicitly teach that the coefficient b is 100 and coefficient a is a negative real number such as -5.3, -3.3, or -4.4. Nishino et al teaches that the whiteness (W) can be calculated from the equation " $W=100-(100-L)^2 + a^2 + b^2$ ", coefficient b is 100 and coefficient a is a variable negative real number (column 8, lines 5-17). Thus, it would have been an obvious at the time the invention was made to modify the equation of Ikeda et al by choosing the different values of the coefficient a and b as taught by Nishino et al for the same purpose of determining the whiteness of light emitted from a light source.

#### ***Allowable Subject Matter***

8. Claim 7 is allowed.

#### ***Response to Arguments***

9. Applicant's arguments filed 4/20/04 have been fully considered but they are not persuasive.

a. Regarding claims 1 and 84, as mentioned above the Ikeda et al reference read on the claimed invention, especially equation in column 10, line 7. As understood, equation can be derives as follow:

$$W=1-1/40\{C^2+[4(10-V)]^2\}^{1/2}$$

$$W= -1/40\{C^2+[4(10-V)]^2\}^{1/2} + 1$$

When:  $+[4(10-V)]^2$  is a very small number, we have

$$W= -1/40\{C^2\}^{1/2} + 1$$

Thus,  $W=-1/40C + 1$

Let  $a= -1/40$  and  $b= 1$ ,  $W= aC + b$  , therefore the equation is the same as equation claimed in present claims 1 and 84.

b. Applicant's remarks, page 7, argue that Ikeda does not teach or suggest that the V value approaches a numerical value of 10 or that the term  $[4(10-V)]^2$  approaches zero. Applicant is noted that the value V is variable, therefore it could be any value and at the value  $V=10$ , the reference read on the present claimed invention. Nowhere in Ikeda recites that the value V cannot be 10 or the term  $[4(10-V)]^2$  cannot approach to zero. In addition, the two equations  $W_1$  and  $W_2$  are the same when V is equal to 10.

c. Applicant 's remarks, pages 7-9, argues that the present invention is directed to a method for measuring whiteness of light emitted from a light source while the references teach evaluating the whiteness of a compound. However, the argument is based on the present specification, nowhere in the body of the claims teaches such the feature. Claims must be examined on the basis of what they say, absent limitations may not be considered to be present.

d. Regarding claims 85-90, since the limitations in claims 85 and 90 are not supported by the original disclosure. If disagree, Applicant should point out where these limitations in the specification in the next response.


10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (571) 272-2426. The examiner can normally be reached on 7:30AM to 6 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoa Q. Pham  
Primary Examiner  
Art Unit 2877

HP  
June 29, 2004